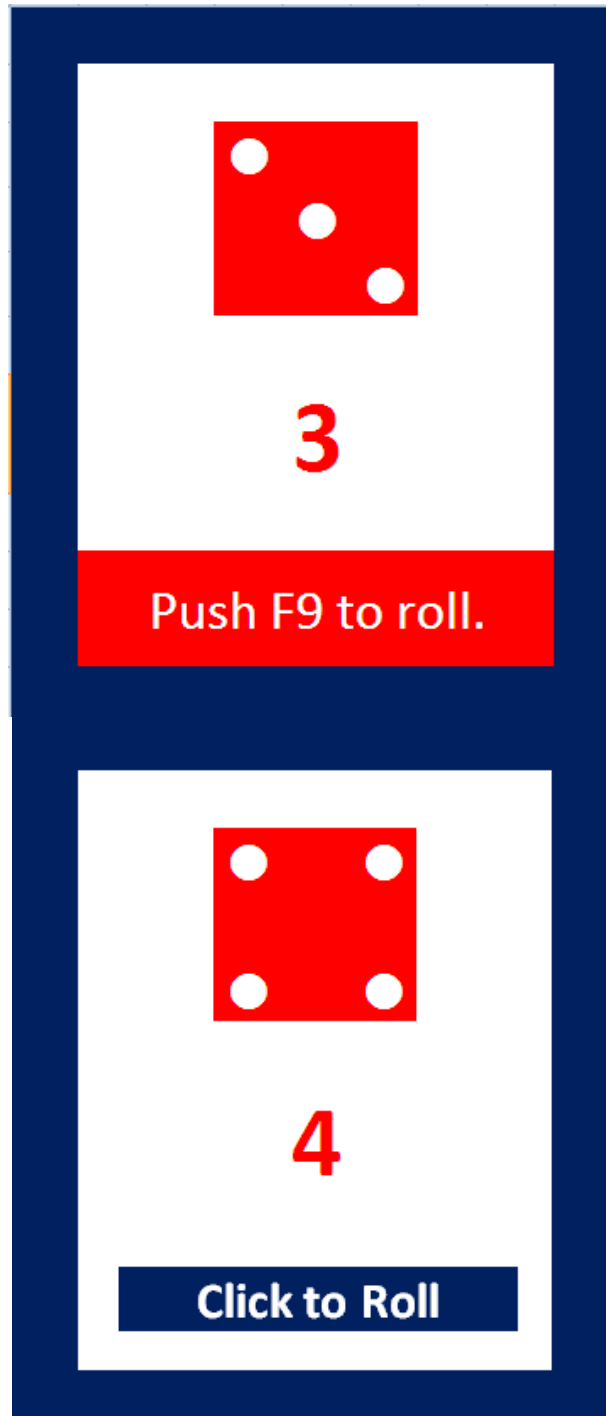


## 6) ROLL THE DICE

This gadget rolls dice.



## STEP 1: SETUP

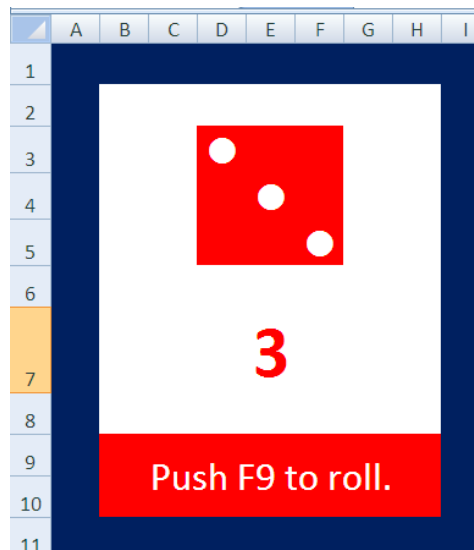
Set up the worksheet as shown in the illustration. Use your choice of fill colors, fonts, font colors, and font sizes.

The columns are set to 40 pixels wide. The rows are set to 34 pixels high, except for row 7 which is set to 70 pixels.

Set the font in cells D3:F6 to Wingdings. The letter “L” in Wingdings is a dot. The font size in the example is 22.

Merge and center cells D7:F7. Change the font size to 36 and the color to red.

Merge and center cells B9:H10. Set the font size to 20, the font color to white, and the fill color to red.



## STEP 2: ENTER THE =RANDBETWEEN() FORMULAS

In cell D7, enter the formula: **=RANDBETWEEN(1,6)**

This formula will randomly pick a number from 1 to 6.

Now when the F9 button is pressed on the keyboard, a random number from 1 to 6 will show up in cell D7.

### STEP 3: ENTER FORMULAS IN THE DIE

Each square in the die will have different “IF” statement telling it to either show the dot or leave the cell red. Remember that the font on the die has to be set to Wingdings in order to work. Enter the following statements in the related cells:

D3: =IF(OR(D7=2,D7=3,D7=5,D7=4,D7=6),"I","")

D4: =IF(OR(D7=6),"I","")

D5: =IF(OR(D7=4,D7=5,D7=6),"I","")

E4: =IF(OR(D7=1,D7=3,D7=5),"I","")

F3: =IF(OR(D7=4,D7=5,,D7=6),"I","")

F4: =IF(OR(D7=6),"I","")

F5: =IF(OR(D7=2,D7=3,D7=4,D7=5,D7=6),"I","")

### STEP 4: ROLL THE DICE

Press the F9 key to roll the die, and the die should change numbers.

### STEP 5: SAVE AND PLAY

Don't forget to save your file as Roll the Dice.

### STEP 6: ADD A “CLICK TO ROLL” BUTTON



Turn off the merge and center for cells B9:H10. Delete the text in the cells.

Create a text box (INSERT>TEXT>TEXT BOX).

Set the height to .3 and the width to 1.5.

Center the text horizontally and vertically.

Change the color of the box to blue and the font color to white.

#### STEP 7: CREATE A MACRO

You need to program the Click to Roll text box so that each time you click it, the sheet will recalculate and put new random number in cell D7.

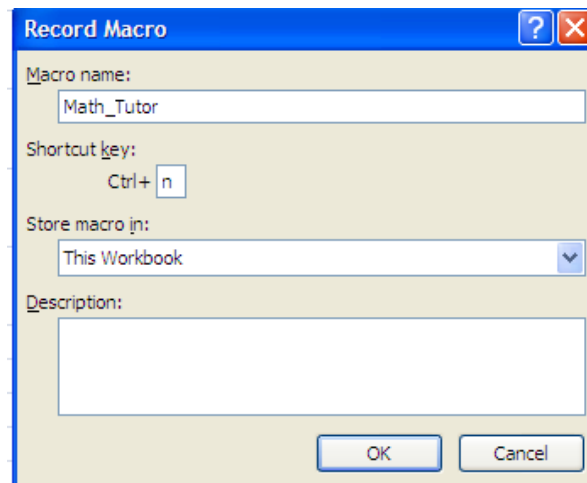
Click on VIEW>MACROS>MACROS>RECORD MACRO

Name the Macro “Roll”

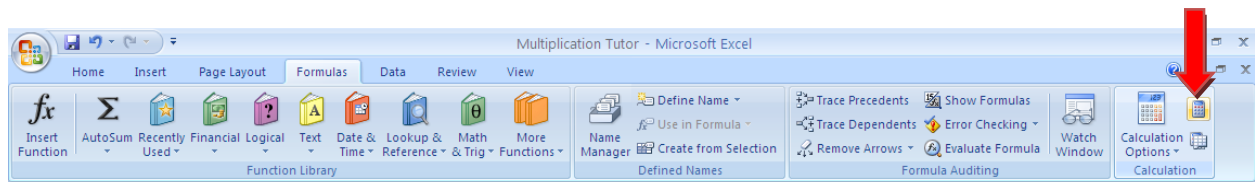
Assign the shortcut key CTRL+n, so when you type CTRL+n, it will launch the macro.

Click OK.

The macro is now being recorded.



Type F9



Click on VIEW>MACROS>MACROS>STOP RECORDING

The macro has now been saved.

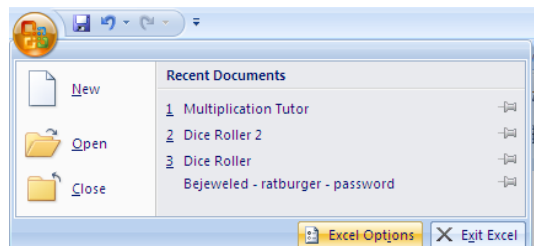
## STEP 8: ASSIGN THE MATH\_TUTOR MACRO TO THE NEW PROBLEM BUTTON

Right-click on the Click to Roll button, and select “assign macro.” Then click on “Roll” and OK.

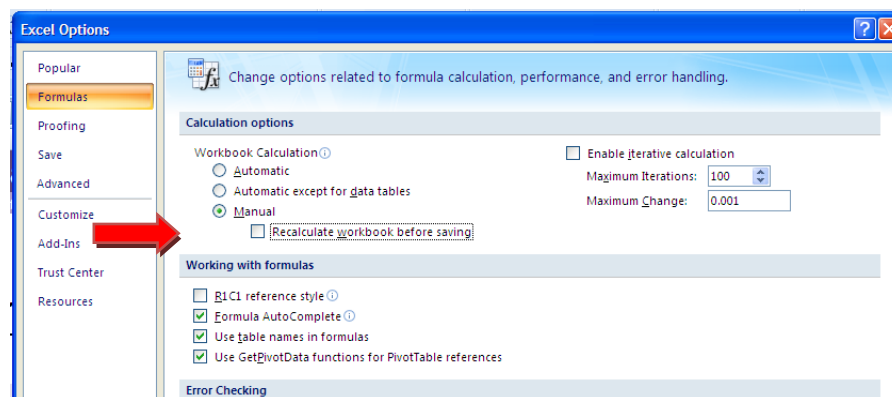
## STEP 9: SET UP MANUAL RECALCULATION

In order for the macro, the automatic recalculation feature has to be turned off.

To do this, click on OFFICE BUTTON>EXCEL OPTIONS



Next, click on Formulas and change the calculation options to Manual as shown.



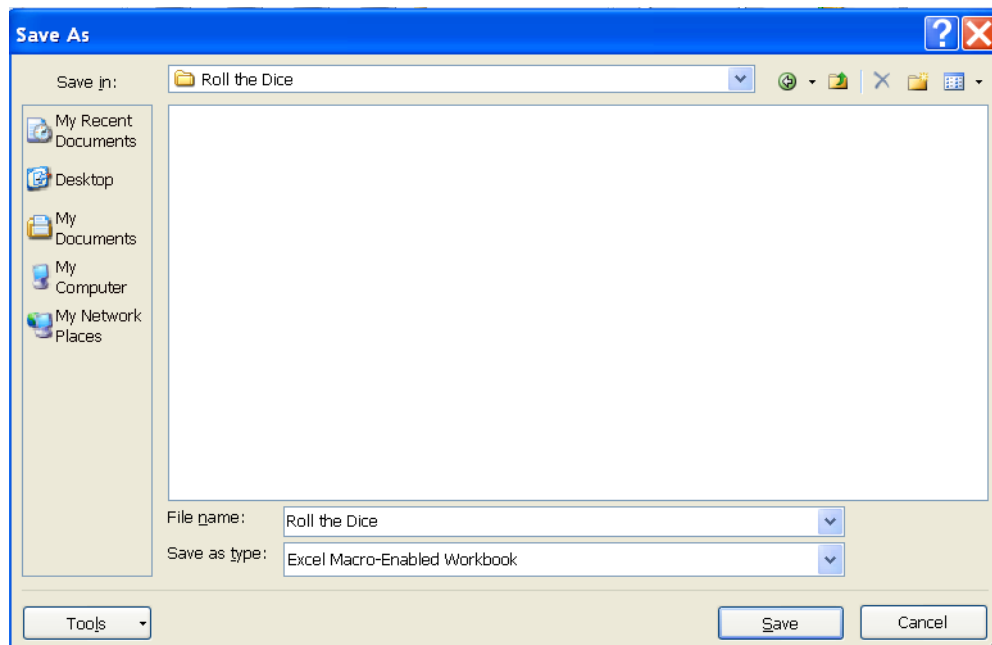
## STEP 10: FORMAT CELL D8 AND PROTECT THE SHEET

Protect the entire sheet so that the user has access to no cells.

## STEP 11: SAVE AND PLAY

Save your Roll the Dice gadget as an “Excel Macro-Enabled Workbook.”

You are now ready to play.



## STEP 12: CHALLENGE

Change this gadget so there are 2 dice on it. Make the gadget add the total value of both dice.

